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ABSTRACT

This document provides an estimation of the ways in which Jefferson College (Missouri) impacts the economy of Jefferson County and the state as a whole. It offers quantitative information and acts as a reference for the Board of Trustees, administrators, faculty, and staff regarding the economic significance of the college to the area it serves. Part A of this report identifies the economic impact of the college in the local community and examines its spending patterns. The total spending impact of the college, using data from fiscal year 1996-97, was $20,521,915. Part B calculates the additional tax revenues to the county and state as a result of increased earning power of Jefferson graduates. The expected increments in county sales taxes from 1996-97 graduates over their working lives was $7,135,768, and $13,350,981 in state income taxes. Part C identifies the estimated annual cost to a typical county resident to support the college. Part D estimates the total employment impact in the county related to the college's operations. Finally, part E computes the magnitude of external dollars accessed and retained for the county as a result of the community's investment in the college. The data indicate that Jefferson College has a major impact on the economy of Jefferson County and on Missouri. (Contains 7 figures and 6 endnotes.) (VWC)

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ED 434 688

Jefferson College
Office of Research & Planning

Executive Summary

August 25, 1998

Title

The Economic Impact of Jefferson College on the Community and State – FY1997.

Applications

The purpose of this study is to provide an estimation of the ways in which Jefferson College impacts and stimulates the economy of Jefferson County and the state as a whole. It provides quantitative information for use by the Board of Trustees and the Administrative Cabinet in institutional planning endeavors and for use by the Public Relations Office in marketing and public information services. It is also a useful reference for faculty and staff regarding the economic significance of the College to the area it serves.

Summary

Using data from FY 96-97, this report is the latest in a series of economic impact studies. It is an update of the study published in April 1998 and utilizes revised estimates of county sales tax and state income tax revenues expected from College graduates. It continues, nevertheless, to provide conservative estimates of the financial and employment impact of the institution. The primary findings are as follows:

- The total spending impact of the College in Jefferson County is $20,521,915. Direct spending amounts to $10,801,008, and $9,720,907 is induced.
- The expected increments in county sales taxes from 1996-97 Jefferson graduates over their working lives is $7,135,768 and $13,350,981 in state income taxes.
- The annual cost for a resident or family to support the college depends on the assessed valuation of their real and personal property but is only pennies a day ($39.37 in the example).
- Total full-time college-related employment for FY 1997 was estimated at 1000; 244 employed directly by the college, and 756 positions induced by the institution's spending patterns. In all, 1,589 people are estimated to rely on the college for their employment in the county.
- The revenue stream in Jefferson County is enhanced by $12,142,401 captured from external sources and $3,714,989 retained in tuition fees for a total of $15,857,390.

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The Economic Impact of Jefferson College On the Community and State – FY1997

August 25, 1998

Jefferson College routinely computes and publicizes its estimated economic impact on the local community and the entire state. To emphasize its commitment of service to the community, this study has been made current using fiscal year 1996-97 data. The purposes of this investigation are to:

(A) Identify the economic impact of the College in the community through an examination of its spending patterns;
(B) Calculate the additional tax revenues that accrue to the county and the state as a result of the increased earning power of Jefferson graduates;
(C) Identify the estimated annual cost for a typical county resident to support the college;
(D) Estimate the total employment impact in the county related to the College's operations; and
(E) Compute the magnitude of the external dollars accessed and retained for Jefferson County as a result of the community's investment in the College.

This brief report does not delve deeply into the methodology for calculating the economic estimates obtained although the annotated worksheets are available in the appendix. However, every effort has been made to use conservative estimates so that the economic impact of the college is not overstated. For further information on the methodology for constructing an economic impact statement, the reader is referred to Ryan and Malgieri [1], Seybert[2] , and Bluestone[3] as primary sources, as well as the previous institutional economic impact reports[4] available through the College's Office of Research and Planning.

A. The Economic Impact of Jefferson College's Spending Patterns

Jefferson College is a major contributor to the county's economy. The College's spending patterns stimulate the local economy directly and induce additional spending to the benefit of the local economy. Direct spending includes the actual spending of the institution as well as the spending patterns of its employees and the student body. It includes only that portion of the institution's total spending that can be applied to in-county purchases. This information for FY 1997 is summarized in the following table.

Table 1 -- In-County Expenditures

Jefferson College Spending Source	Amount
In-County College Expenditures (20% of total expenditures for FY 1996).	$1,376,275
Total Estimated College Employees' Expenditures In-County	$2,174,105
Total Estimated College-Related Expenditures by Full-Time Equivalent Students	$7,250,628
Total Economic Impact of In-County Expenditures	$10,801,008

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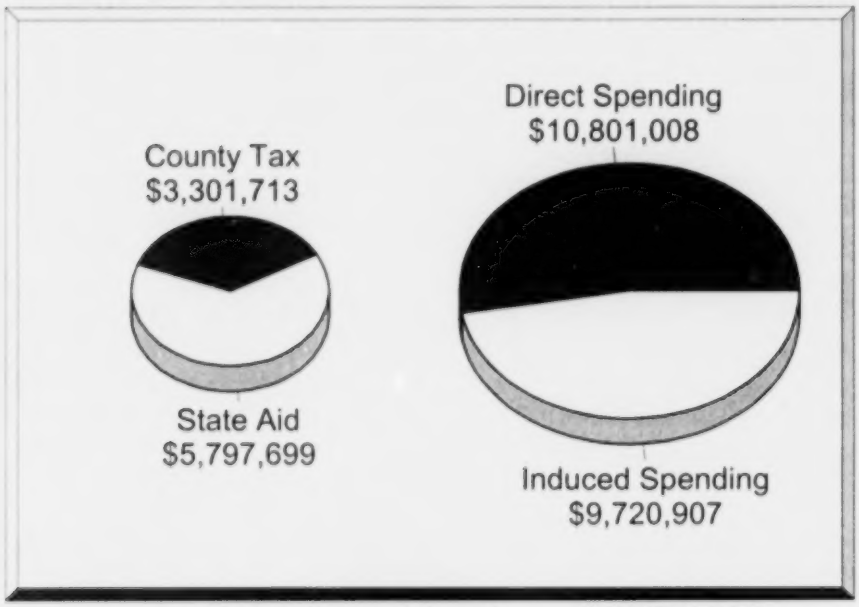
Induced spending can also be estimated from this initial round of direct spending. Induced spending is referred to in the literature as the "multiplier effect." In brief, the multiplier concept means that for each dollar initially spent by the institution, employees, and students, a portion is re-spent within the community by local merchants for materials and supplies for other business operations (such as local taxes), for goods and services produced outside the community, or for employee wages. This re-spending is the first induced round of economic stimulation. The recycling process of dollars continues with diminishing increments at each stage. The average multiplier mentioned in the literature is 1.9 with the range being from 1.2 to 3.0. Using the average multiplier, 1.9, as a conservative measure, the induced spending in Jefferson County associated with the College's direct spending results in a **total spending impact of $20,521,915 in the community**.

The relationship between local and state support for the College and its economic stimulation in the community is graphically represented in Figure 1.

Figure 1 -- Total Investment and Economic Impact



Total Investment = $9,099,412
Total Spending Impact = $20,521,915

These spending patterns translate into **a return on taxpayer investment of $2.26 for each $1.00 invested.** Based on the portion of financial support, this **translates into a benefit to the county of an extra $0.82 and a benefit to the state of an extra $1.44 for each dollar invested.** The worksheets for calculating these estimates are in the appendix.

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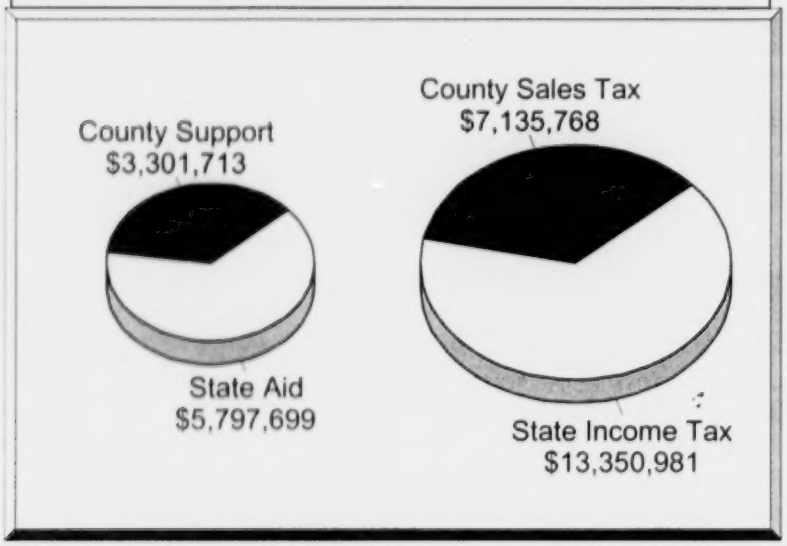
B. ***Increments in County & State Tax Revenues from Jefferson College Graduates***

Other benefits accrue to the county and the state due to the increased earning power (and, therefore, tax liability) of college graduates. It is well known that earning power increases with years of education completed. Other significant factors involved in earning power are gender and race. Furthermore, the productive working life increases in proportion to the years of education completed.[5] Using worklife expectancy and gender tables, the increments in tax revenues that will accrue to the county (in the form of additional sales taxes) and to the state (in the form of additional income taxes) can be calculated.

Using the number of Jefferson College graduates in 1996-97 and the known students who transferred and graduated from public four-year institutions as the base, the increments in county sales taxes and state income taxes accruing by virtue of their increased earning power, spending power, and worklife expectancies are computed. There were 786 certificate, associate, bachelor, and other program completers in 1996-97. **The net worklife increment in state tax revenue from these Jefferson College graduates is estimated at $13,350,981. The net worklife increment in county tax revenue is estimated at $7,135,768.** Therefore, for a total county/state investment of $9,099,412, **a total increment in sales and income taxes of $20,486,749 can be expected from the Jefferson College graduates over their working lives.** Figure 2. below depicts this relationship.

Figure 2 -- Increments in County and State Taxe Over the Working Lives of Graduates



Total Investment = $9,099,412
Total Increment = $20,486,749

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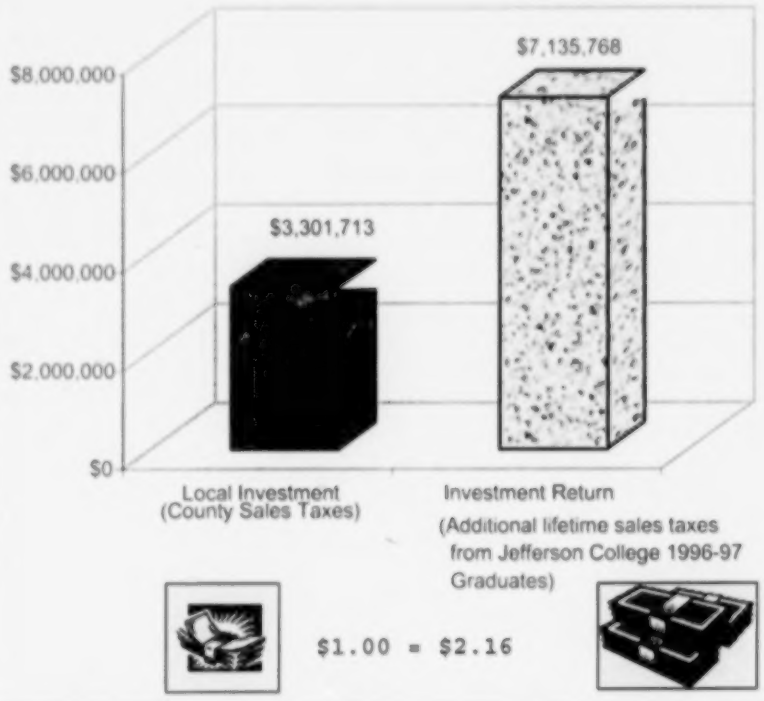
The significance of this analysis is that substantial investment returns accrue to the county as a result of their support of the college even if the impact of the spending patterns within the county are not considered. Just in terms of the additional sales tax revenues that will accrue to the county over the working lives of the college graduates, there is significant investment return on the dollar. Figure 3 shows this relationship.

Figure 3: Investment Return on the Tax Dollar
Local - County Sales Taxes



For every dollar invested in support of Jefferson College, the county can expect to receive not only their tax dollar back but also an additional $2.16 in sales taxes. The same investment return is true for the state, too. Figure 4 on the following page shows the investment return in additional income tax revenues for their aid to the college.

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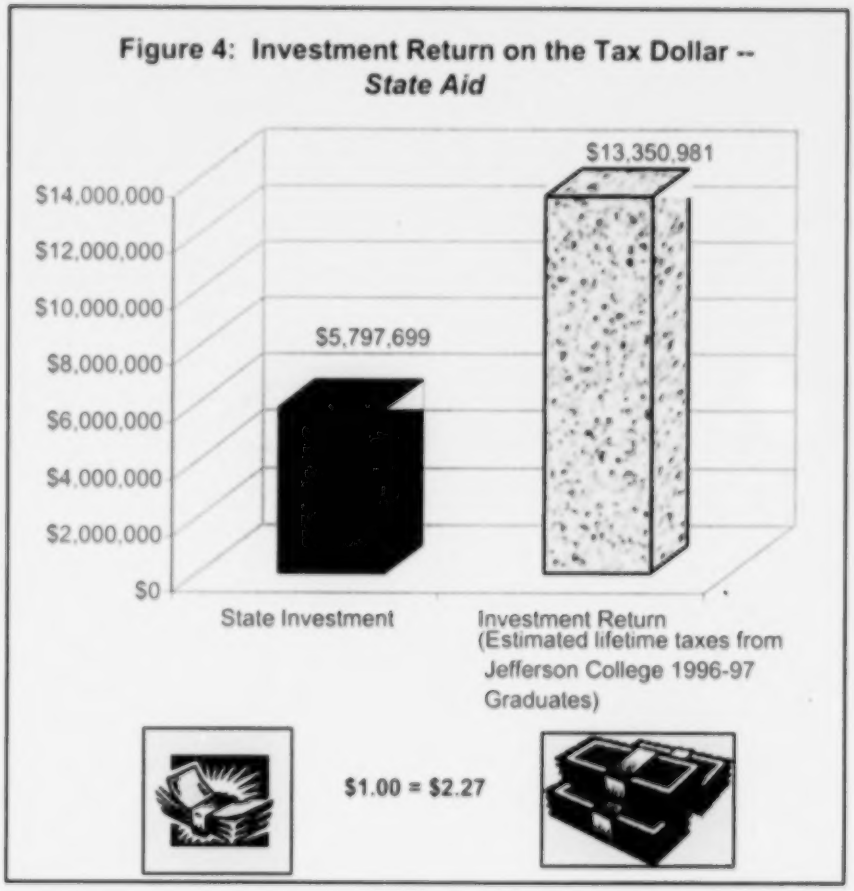

The investment return that will accrue to the state for every dollar invested in college aid is an additional $2.27. Investing in a student's education is indeed an astute investment strategy.

C. An Example of the Cost to a Typical County Resident or Family to Support Jefferson College

The preceding analyses of the spending impact of the College and the tax increments that will accrue from Jefferson graduates provides substantial justification for public financial support. But what is the estimated cost to an average family residing in the county? How much does it cost the typical Jefferson County resident annually to support the college?

Assessed valuation rates differ for agricultural, residential, and commercial property. In 1997, residential real and personal property was assessed at a rate of nineteen cents per $100 valuation. Agricultural was assessed at twelve cents and commercial at thirty-two cents. Jefferson College's taxing rate was twenty-three cents on the assessed value of the real and personal property. As an example, assume that a person owns a home at the median value for the county ($65,100 according to the State Census Bureau 1990 STF3, Table H61) and has taxable personal property of $25,000. Table 2, below, demonstrates how much this would cost a Jefferson County resident or family to annually support their community college.

Table 2 -- Computation of Cost to Support Jefferson College for an Average Resident or Family (1997 Tax Rates)

If the market value of your home was $65,100, then the assessed value was: (Market Value x .19)	$12,369
If the market value of your taxable personal property was $25,000, then the assessed value was: (Market Value x .19)	$4,750
The total assessed valuation of your real and personal property was:	$17,119
The Jefferson College tax levy for 1996 was $.23 per $100 (.0023 x the assessed valuation)	$0.23
The cost of support for Jefferson College was	$39.37

The preceding computations are just an example, but it is clear that the cost for a resident or family to support Jefferson College is not large. The cost-to-benefits ratio is very favorable when the total economic impact of the College in the community, and the tax increments that will accrue to the county from the college graduates, are taken into consideration. Furthermore, this analysis does not even begin to estimate the value of the cultural, social, athletic, and similar events sponsored by the college for the community, nor the leadership and technical expertise its employees provide to community businesses and organizations.

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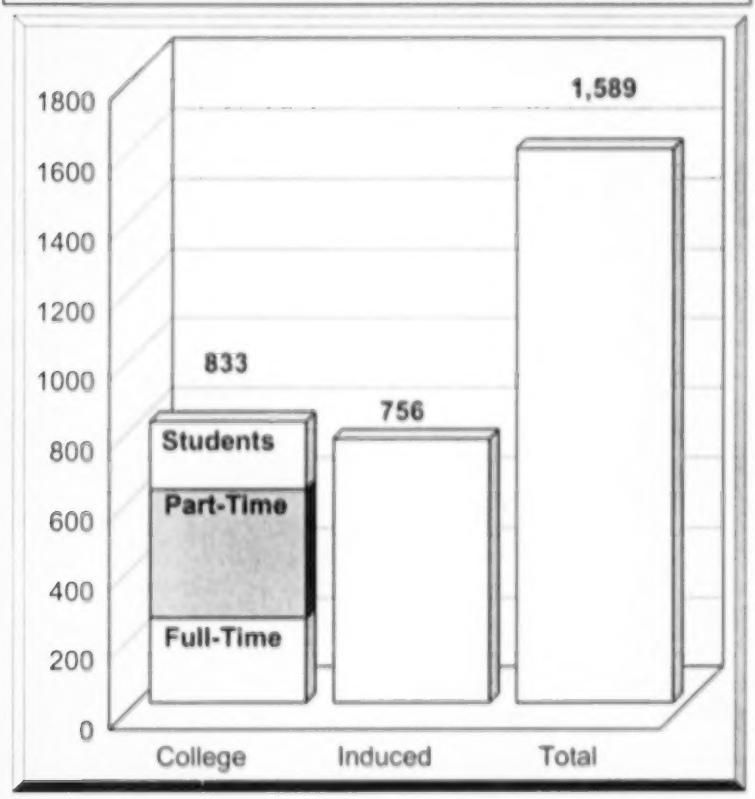
D. The Employment Impact of Jefferson College in the Community

Another factor to consider in the overall economic impact of Jefferson College in the community is the amount of employment created. Jefferson College employs full-time and part-time faculty and staff as well as providing work-study employment for college students. According to the institution's 1997 end-of-year payroll records, there were 244 full-time, 396 part-time, and 193 part-time student employees at the college for **a total of 833 people employed by the College**. Furthermore, employment opportunities are created within the community by virtue of the college's spending patterns. A typical estimate of this induced employment as found in the literature[6] and based on the total expenditures of the College in the community results in **an estimate of an additional 756 full-time positions created**. Figure 5, below, graphically represents the employment components.

Figure 5 -- College-Related Employment



Total College-Related Employment = 1,589

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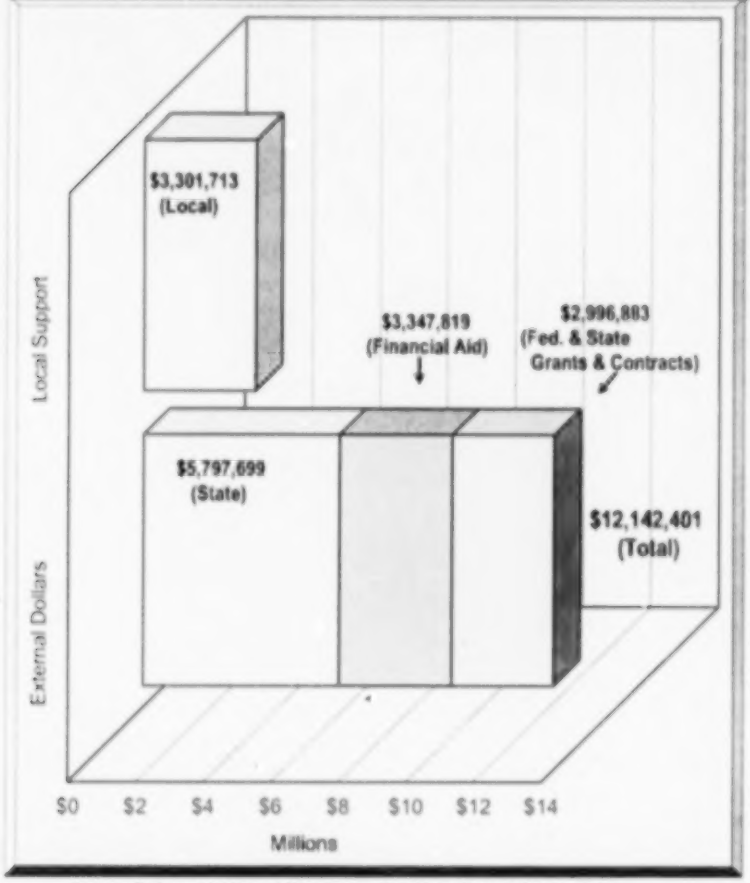
E. External Dollars Accessed and Retained for the Community by Jefferson College

A final component of the economic impact of the College in the community is the ability of the College to access external dollars into the county and the ability to retain other dollars within the community. First of all, the college is eligible to receive external dollars in the form of state aid, federal student financial aid, and vocational aid. It is eligible to receive these funds in part because of the local financial support it receives. **In FY 96-97, the college was able to access $12,142,401 dollars for use in the county**. The chart below presents these data.

Figure 6 -- External Dollars Accessed From Local Support



Source: Refer to "Additional Data Sources" on Notes Page in the Appendix

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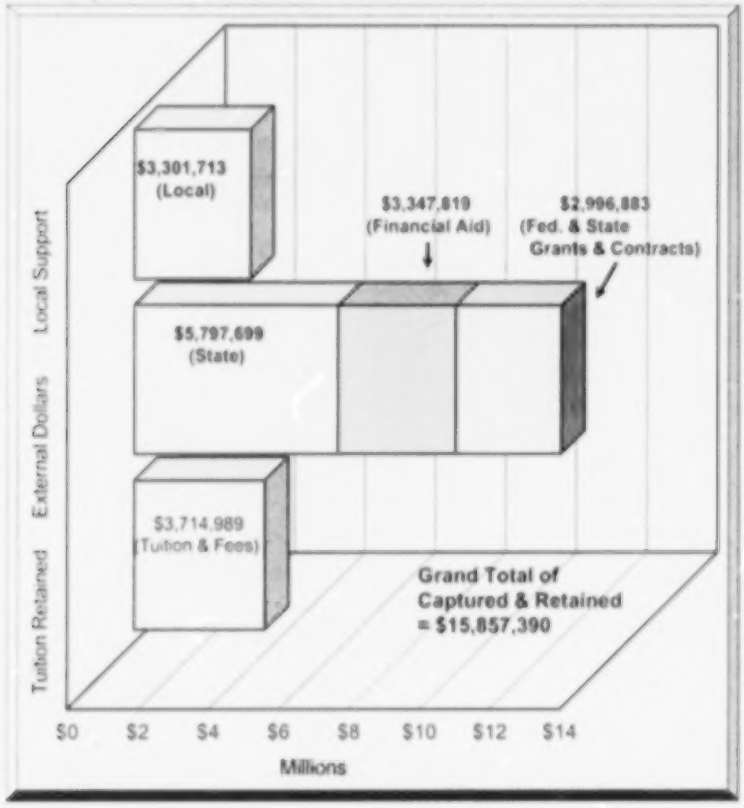
Moreover, tuition dollars paid by students are also retained in the community adding to the overall economic stimulation. These are dollars which, presumably, would not recycle in the local economy if the College were not present. The next figure shows the total extent of dollars accessed and retained in the community.

Figure 7 -- The Revenue Stream: Captured and Retained Dollars



Source: Refer to "Additional Data Sources" on Notes Page in the Appendix

The influx of dollars captured and retained in the revenue stream for Jefferson County is impressive. **$15,857,390 additional dollars are available for economic stimulation.** The College is a major contributor to the economic health of the county even when the revenue stream is considered alone.

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Summary

In conclusion, it is evident that Jefferson College has a major impact on the economy of Jefferson County and on the state as a whole. It is also important to reiterate that, although the calculations in this report are estimates, **they are consistently conservative estimates**. Every effort has been made to systematically use conservative estimates whenever assumptions were made in regard to dollar amounts or people.

Economic impact is not a singular concept, and this study has attempted to define it from the positive aspect of economic stimulation and future investment returns as well as from the aspect of the cost it places on the average residential property owner. It is an important public accountability issue to make known the extent of the economic contribution of Jefferson College to its community and to the state.

The spending impact of the College in Jefferson County in FY 1997 amounted to $20,521,915. The tax increments that will accrue to the county and the state as a result of the 1996-97 Jefferson graduates' increased earning power are $5,726,492 and $10,570,745 respectively. The number of college-related jobs in the county are estimated at 1,589. The amount of external dollars captured during the fiscal year was $12,142,401, and the amount of tuition dollars retained in the county was $3,714,989. And all the preceding economic benefits cost a Jefferson County resident or family pennies a day or less ($39.37 annually in the example). Investment in higher education at Jefferson College is an astute choice.

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[1] Ryan, G. J., and Malgieri, P., "Economic Impact Studies in Community Colleges: The Shortcut Method," National Council for Resource Development, Resource Paper No. 48, February, 1992.

[2] Seybert, Jeffrey, "The Economic Impact of Higher Education on the Kansas City Metropolitan Area 1988-89," A report prepared for the Kansas City Regional Council for Higher Education, April 1991.

[3] Bluestone, Barry, "UMASS/Boston: An Economic Impact Analysis," University of Massachusetts, Boston, January 1993.

[4] Lange, J. E., "The Economic Impact of Jefferson College on the Community and the State," Office of Institutional Research, Jefferson College, February 1994 (and updated annually).

[5] Smith, Shirley J., "Worklife Estimates: Effects of Race and Education," U.S. Department of Labor, Bureau of Labor Statistics, Bulletin 2254, February 1986.

[6] Office of Institutional Research and Strategic Planning, "The Economic Impact of Utah Valley Community College on Utah County, 1988-89," Utah Valley Community College, February 1990.

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